



DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

[Document No. AMS-FV-11-0050, FV-12-328]

United States Standards for Grades of Grapefruit Juice

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Notice.

SUMMARY: The Agricultural Marketing Service (AMS) of the Department of Agriculture (USDA) has revised the United States Standards for Grades of Grapefruit Juice. The grade standards for grapefruit juice have been changed to remove the parameters for maximum "free and suspended pulp" to account for advances in industry processing technology.

EFFECTIVE DATE: [Insert date 30 days after date of publication in the **Federal Register**].

FOR FURTHER INFORMATION CONTACT: Brian E. Griffin, Inspection and Standardization Branch, Processed Products Division, Fruit and Vegetable Program, Agricultural Marketing Service, U.S. Department of Agriculture, 1400 Independence Avenue SW., Room 0709, South Building; STOP 0247, Washington, DC 20250; fax: (202) 690-1527; or internet at <http://www.regulations.gov>. The U.S. Standards for Grades of Grapefruit Juice are available through the address cited above and on the AMS website at <http://www.ams.usda.gov/AMSV1.0/processedinspection>.

SUPPLEMENTARY INFORMATION:

Section 203(c) of the Agricultural Marketing Act of 1946 (7 U.S.C. 1624-1627), as amended, directs and authorizes the Secretary of Agriculture "to develop and improve standards of quality, condition, quantity, grade, and packaging, and recommend and demonstrate such standards in order to encourage uniformity and consistency in commercial practices."

AMS is committed to carrying out this authority in a manner that facilitates the marketing of agricultural commodities and makes copies of official grade standards available upon request. Those voluntary U.S. Standards for Grades of Fruits and Vegetables no longer appear in the Code of Federal Regulations, 7 CFR part 52, but are maintained by USDA, AMS, Fruit and Vegetable Programs. AMS is revising the U.S. Standards for Grades of Grapefruit Juice using the procedures that appear in part 36 of Title 7 of the Code of Federal Regulations (7 CFR part 36).

BACKGROUND:

AMS received a petition from the Florida Citrus Processors Association, an association of citrus producers, requesting revisions to the U.S. Standards for Grades of Grapefruit Juice. The petitioner requested the removal of the maximum limit for "free and suspended pulp" (referred to in the industry as

"sinking pulp") from the U.S. grade standards for all forms of grapefruit juice.

The grade standards, effective since September 12, 1983, provided that grapefruit juice from concentrate, grapefruit juice, and frozen concentrated grapefruit juice establish limits for maximum free and suspended pulp as follows: "Grade A" - 10 percent by volume, and "Grade B" - 15 percent by volume. Concentrated grapefruit juice for manufacturing requirements for maximum free and suspended pulp are as follows: "Grade A" - 10 percent by volume, and "Grade B" - 12 percent by volume.

The petitioner believes that, with respect to maximum values for "free and suspended pulp", the existing U.S. Standards for Grades of Grapefruit Juice do not take into account modern extraction and finishing technologies, nor are they supported by evidence of a correlation between these criteria and acceptable flavor. The petitioner also believes that removing the "free and suspended pulp" values from the grade standards would allow processors to process the entire grapefruit crop without resorting to expensive technologies that increase the cost of juice with no concomitant benefit. More mature grapefruit tends to be sweeter, but when juiced, tends to cause the product to exceed maximum free and suspended pulp values.

Processing technologies used in the early 1940s were considerably different than the technologies in place today. In the developmental stages of the citrus industry, the amount of sinking pulp was an indication of excessive pressures used in extraction and finishing of citrus juice, resulting in bitter flavor. It was noted that sinking pulp levels could be correlated to bitter flavor. The bitter flavors are due to the naturally occurring naringin and limonin components found in grapefruit juice. Although bitterness is an inherent contributor to what we know as "grapefruit flavor," an excessive amount of bitterness can be objectionable to some consumers.

Current industry practices have shown us that sinking pulp levels can be greatly influenced by modern processing techniques, which eliminate the correlation between sinking pulp and excessive bitterness.

The petitioner submitted research data covering a six season period which illustrates levels of sinking pulp vs. naringin, and levels of sinking pulp vs. limonin using variations in extractor settings. The petitioner also submitted data on a sensory evaluation performed by the University of Florida on consumer acceptability of grapefruit juice with two free and suspended pulp levels. The petitioner's research data supports the premise that modern extraction and finishing technologies produce a product where there is no correlation

between grapefruit juice flavor components associated with bitter and off flavor i.e., naringin and limonin, and free and suspended pulp levels.

Prior to undertaking research and other work associated with revising the grade standards, AMS sought public comments on the petition (see 76 FR 51343).

Two comments were received regarding this petition. One comment was from a trade association with international membership; and one comment was from a trade association in the U.S. representing over 8,000 citrus growers. Both comments were in support of the petition to remove the maximum limit for "free and suspended pulp" from the U.S. Standards for Grades of Grapefruit Juice.

AMS sought public comments a second time on the petition (see 77 FR 6773). One comment was received regarding this petition from a trade association with international membership in support of the petition to remove the maximum limit for "free and suspended pulp" from the U.S. Standards for Grades of Grapefruit Juice.

This revision of the U.S. Standards for Grades of Grapefruit Juice better reflects the current industry processing technology for grapefruit juice.

Authority: 7 U.S.C. 1621-1627.

Dated: August 21, 2012

David R. Shipman
Administrator
Agricultural Marketing Service

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